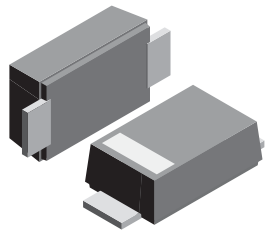
SUNMATE SEMICONDUCTORCO · LIMITED

GS2AF - GS2MF

SURFACE MOUNT SILICON RECTIFIER DIODES

VOLTAGE RANGE: 50 - 1000V
CURRENT: 2.0 A



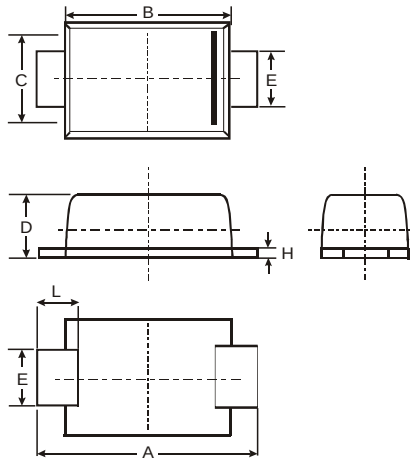
Features

- For surface mounted applications
- Low reverse leakage
- Built-in strain relief,ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed: 250° C/10 seconds at terminals

Mechanical Data

- Case:SMBF , Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.0018 ounces,0.05grams

RoHS COMPLIANT



SMBF			
Dim	Min	Max	Typ
A	5.45	5.55	5.50
B	4.27	4.33	4.30
C	3.57	3.63	3.60
D	1.32	1.38	1.35
E	1.96	2.00	1.98
H	0.019	0.021	0.20
L	0.73	0.77	0.75
All Dimensions in mm			

Maximum Ratings and Electrical Characteristics

T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	GS2AF	GS2BF	GS2DF	GS2GF	GS2JF	GS2KF	GS2MF	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current at T_L=110℃	$I_{(AV)}$	2.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	60.0							A
Maximum instantaneous forward voltage at 2.0A	V_F	1.1							V
Maximum DC reverse current T_A=25℃ at rated DC blocking voltage T_A=100℃	I_R	5.0 50.0							μA
Typical junction capacitance (NOTE 1)	C_J	30.0							pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	50.0							°C/W
Operating junction and storage temperature range	T_J,T_{STG}	-65 to +175							°C

Note: 1.Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2.P.C.B. mounted with 0.2x0.2″(5.0x5.0mm) copper pad areas

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RATINGS AND CHARACTERISTIC CURVES GS2AF THRU GS2MF

FIG. 1- FORWARD CURRENT DERATING CURVE

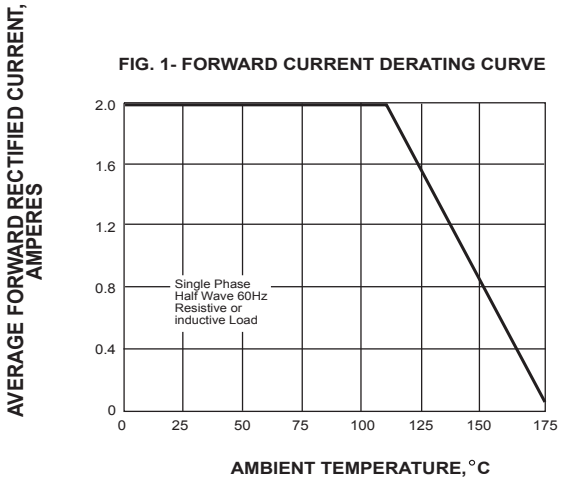

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

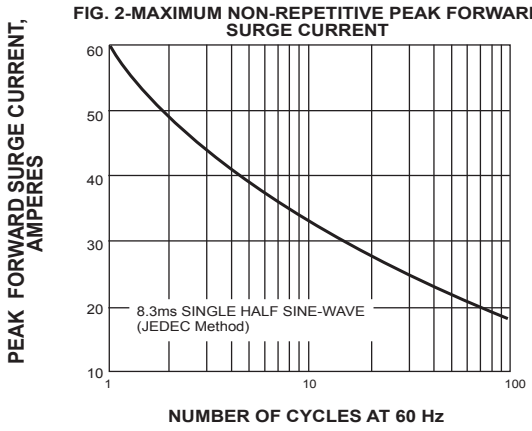

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

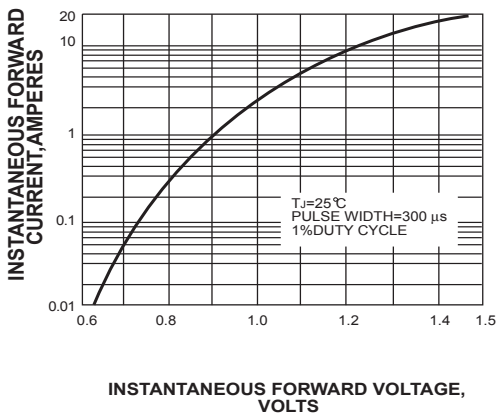

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

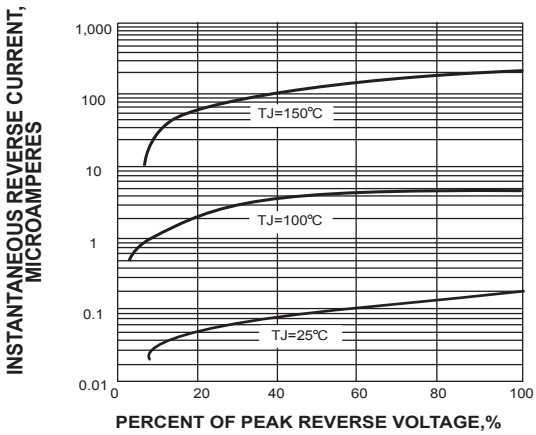

FIG. 5-TYPICAL JUNCTION CAPACITANCE

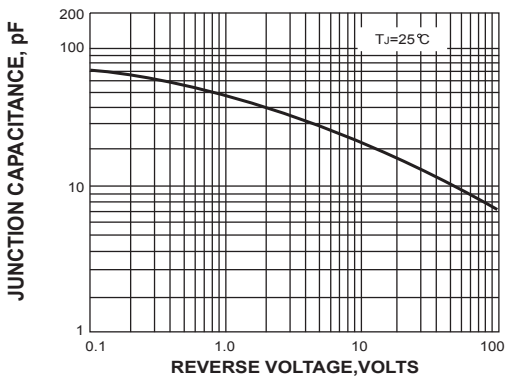
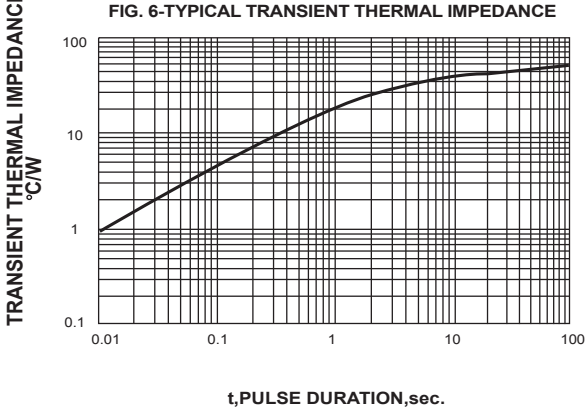
FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE